THE IMPACT OF FINANCIAL AID ON COLLEGE PARTICIPATION: MEETING THE NEEDS OF THE UNDER-SERVED

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Annual Meeting of the Association for the Study of Higher Education
Sacramento, California
November 16-19, 2000

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INTRODUCTION

Human capital theorists (Schultz 1961; Becker 1964; Denison 1967) have demonstrated that social and economic mobility are critical to postsecondary education in today's society. When state appropriations to postsecondary education lag, the results often include short-sighted cuts to valuable programs, increases in tuition costs, and potential drops in participation rates. These reductions adversely impact the ability of higher education to provide the resources needed to improve the human capital stock of society (Curtin and Nelson, 1999). From a campus perspective, declining state appropriations lead to a destabilization of institutional budgets unless other revenue streams are found. Increasing the institutional reliance upon grant and contract work to raise revenues is one possibility, but the biggest share of the "revenue crunch" is passed on to students via increases in tuition and fees (Leslie and Slaughter, 1997). Students and their families are forced to weigh the present costs of college, including tuition levels and deferred income, against the future economic benefits of the degree.

Researchers have pointed out that rising college costs and decreases in federal and state financial aid have especially stressed minority and low-income student participation in higher education (Justiz, 1994; Heller, 1999). An increased level of commitment to grants, rather than a reliance upon loans, for low income students will do much to combat the aversion to borrowing found among low-income, minority students. Studies have also demonstrated that there is a negative relationship between increases in tuition costs and enrollment rates in college (Heller, 1999). Financial aid becomes a part of the net price of attendance and thus can become the balance to the scale of attendance and non-attendance amongst all students. Finally, the receipt

of financial aid has been shown to be positively associated with retention and persistence rates in postsecondary education (Justiz, 1994).

Recent statewide policy and budgetary developments in Tennessee have focused the attention of elected officials and business leaders on mechanisms to increase participation in the public higher education system. A recent report issued by a special advisory board to the Governor cited financial aid disparities as one of the chief barriers to Tennessee remaining competitive with its peers (Governor's Council, 1999) in terms of economic development, educational attainment, and new job starts. That group was shocked to learn that in 1998-99, over 10,000 low-income high school graduates who were eligible for state based financial aid did not receive grant awards because the state of Tennessee had not appropriated sufficient funds for this need based financial aid (Governor's Council, 1999). For the 1999-2000 fiscal year, this number had grown to over 13,000 (TSAC, 2000).

The primary purpose of this research was to identify and analyze the college participation decisions of those 13,292 non-recipients of state financial aid in the fall of 1999. These individuals are of increased importance to scholars and practitioners because they represent groups historically denied access to higher education. Specifically, 70 percent of the target population fall at or below the poverty level. These potential students represent the citizens who stand to benefit the most from an advanced degree.

THEORETICAL FRAMEWORK/LITERATURE REVIEW

The decision to participate in post-secondary education involves a multi-level process and is influenced by a number of factors. The decisions students make regarding college choice include whether to participate or not participate in higher education, which institution to attend, and how to finance their post-secondary education. According to research (Tierney, 1980;

Hossler, Braxton, and Coopersmith, 1989; Anderson and Hearn 1992; Heller, 1996; Freeman, 1999), economic considerations are a determinant factor in students' college decision-making process. A 1997 study of college freshmen conducted by UCLA found that "more college freshmen than ever before reported that they selected their institutions for financial reasons" (Geraghty, 1997, p. A41). This research found that approximately one-third of the freshman surveyed rated financial aid as "very important" in their choice of a college, while forty percent of those surveyed indicated they would have to work during college. The study also confirms that economic expectations are important to students in making their college choice decision.

When assessing the impact of financial aid in broadening access to post secondary education, it is important to note that financial aid is not a monolithic entity. Rather, financial aid is a multifaceted, multidimensional program intended to help students overcome obstacles to higher education. Financial aid is multifaceted because it is designed to offer an array of financial assistance to students with need. Financial aid programs include various forms of grants, subsidized and unsubsidized student loans, parent loans, tuition assistance, and college work-study programs. Financial aid is multidimensional in terms of its programmatic administration. Specifically, financial aid is administered through federal, state, and college/university entities. In considering the state administration of financial aid, "state support for public higher education has a long and impressive tradition" (Hossler, et al, 1997, p. 188). In "The College Grant Study: The Effectiveness of Student Grant Scholarships in Promoting Equal Opportunity," Fife and Leslie (1976) credit state funded aid programs with encouraging nearly fifty percent of financial aid recipients to attend some type of higher education institution.

The goal of federal and state financial aid programs is to reduce the economic barriers that preclude lower-income students from participating in college. However, there is

considerable debate over the effectiveness of such aid programs in broadening student access to higher education. When evaluating the success of financial aid in helping lower-income students overcome obstacles to higher education, it is important to consider the impact of the various types of aid available to these students, such as loan versus grant, and the impact of the administration of aid to these students. Students are influenced by a number of factors in the course of their college-choice process. As a result, they are likely to respond differentially to the availability and/or award of various forms of financial aid. In studies of the relationship between financial aid and institutional enrollments using the National Longitudinal Study of the High School Class of 1972, research (Jackson, 1978; Blakemore and Low, 1983) showed a positive correlation between the receipt of financial aid regardless of the amount and the probability of a given student's enrollment. However, Blakemore and Low (1985) also found a positive relationship between a decrease in student financial aid and a decline in student enrollment.

In examining the effects of specific forms of financial aid on student enrollment, research (Schwartz, 1985; Moore, Studenmund, and Slobko, 1991) found that increases in grant awards increased the probability of student enrollment, whereas the increased availability of student loans had no significant effect on enrollment. Moreover, in "College Debt and the American Family" (1995), the Institute for Higher Education Policy (IHEP) found that more than fifty-percent of the respondents in their study felt additional loan debt for education would be financially risky for their families. The IHEP study also found that lower income students who rely on student loans to finance their post-secondary education are concerned about their ability to repay the loans. Similar opinions are expressed by all students who rely heavily upon student loans to finance their education. However, these fears are more acute amongst lower income students (IHEP 1995).

As noted, research (Jackson, 1978; Blakemore and Low, 1983; Schwartz, 1985; Blakemore and Lowe 1985; Moore, Studenmund, and Slobko, 1991) regarding the relationship between financial aid and student enrollments implies that the receipt of financial aid factors into students' decisions to enroll in college. While research validates the impact of the receipt of financial aid on the enrollment decision, it also suggests that the receipt of financial aid influences students' choices about the type of institution in which to enroll. As Heller (1996) notes, "Students from lower-income families do tend to be more sensitive to tuition and aid when making undergraduate enrollment decisions than do those from upper-income families" (p. 24).

According to Heller (1996), because poor students have fewer financial resources to pay for college, they have a more "elastic demand" for higher education. That is, with all other things being equal, "family income serves, at least in part, as an effective bypass… with the end result that students from low-income families-- even when qualified-- are often unable to attend college" (Heller, 1996, p. 25). Furthermore, if a student is able to attend, they are often forced to enroll at the community college level because of fiscal constraints. Thus, these students are often prevented from considering selective institutions because of fiscal difficulties. The channeling effect created by fiscal shortcomings denies these students access to the positive impacts on student outcomes related to degree attainment, social status, and economic potential provided by participation at selective institutions (Hearn 1991). Furthermore, "it is well established that tuition is negatively related to student demand for public and private post-secondary education" (Tierney, 1980, p. 528). Economically disadvantaged students are less likely to attend selective institutions. Hearn (1984) also found that lower-SES students are less likely to attend highly selective institutions. Hu and Hossler (1998) found a correlation between price sensitivity and college choice. Students who chose to attend private institutions were less

concerned about cost than those who attended public institutions; and that "high tuition, high aid" strategies failed to consider, not only the ability of students to pay, but also their willingness to pay (Hu and Hosler 1998).

In considering the administration of state financial aid, Blakemore and Low (1985) also studied the effects of cuts in state-funded financial aid on low-income students and found that enrollment declined most significantly among low-income students. Moreover, McPherson and Schapiro (1994) found that lower-income students were disproportionately likely to attend community colleges, and suggest that limited financial aid "may be impairing the ability of low-income students to gain access to institutions other than community colleges" (p. 14). Currently, there are a number of forces that influence the ability of states to meet the demand for need-based financial aid. Among those forces are declining state economies, increased competition for state funds, and increased demand for higher education In fact, Hossler et al, estimate that students are now responsible for "142 percent more when compared to their level of effort from 1980" (1997, p. 161).

Research provides clear information regarding the importance of financial aid, the value of specific types of financial aid programs, and the implications of these factors on the college-choice process for low-income students. However, few studies have focused on what becomes of those students whose financial needs go unfulfilled. The purpose of this study is to explore the impact of the non-receipt of state-funded financial aid on the participation and college choice decisions of unserved students. Specifically, this study explores the following key questions:

1. Do unserved students with financial need have an "elastic demand" for higher education? (i.e., are they less likely to attend)
2. Does the shortfall in state financial aid funding actually deny unserved students access to higher education?

3. For those unserved students who do participate in higher education, are they more likely to be located/concentrated in a particular institution-type?
4. How did those students who were non-recipients of financial aid fund their college or university education?

RESEARCH STRATEGY/METHODOLOGY

This study examines the link between financial aid and college participation. The research represents a sub-set of a larger effort to examine and analyze college choice in Tennessee. In order to determine the relative importance of a variety of factors that impact the participation and college choice decision, a survey was conducted to measure the impact of the non-receipt of state financial aid on the participation and college choice decision. The participants for this research endeavor were randomly selected from an overall population of approximately 13,000 students who were denied state financial aid in 1999. This target population represents those students who were qualified to receive TSAC need-based grants but were not served because of a general lack of state funding during the fiscal year. Of the 13,292 students who were not served by TSAC, an estimated 70% had a combined family income below $19,999. Over 7,600 of the 13,292 students denied aid had an Expected Family Contribution (EFC) of zero.

The target population for this research represents some of the neediest students in higher education. Those students who qualify for TSAC grants are truly some of the most economically disadvantaged residents of Tennessee. The non-receipt of financial aid has the deleterious effect of forcing potential students to maximize their Pell grants and borrow funds to cover the remainder of their costs of attending college. In effect, these students are being asked to mortgage their futures to attend college, and often are placed in an unmanageable financial

situation. Therefore, the non-receipt of financial aid could have a devastating impact on the participation and college choice decision.

To assess the impact of non-receipt upon college choice, a survey was developed and administered to a randomly selected subgroup of the target population in January of 2000. In order to generalize to the target population, the authors utilized simple random sampling to generate the respondent pool. Simple random sampling is the optimal sampling technique (Henry 1990; Dillman 1994) because it presents each member of the target population an equal chance of being selected for inclusion in the study. The sample population contained a pool of 419 respondents and is generalizable to the overall target population at a 95% confidence level, representing a sampling error of no more than ± 5%.

In order to obtain results in a timely and efficient manner, the survey was conducted using computer assisted telephone interviewing (CATI) technology. As Dillman (1994) notes, CATI enables researchers to complete complex surveys in a short time frame because data can be collected, analyzed, and interpreted almost instantly. Furthermore, CATI increases the reliability and validity of the results (Frey 1989; Lavrachas 1993) which improves the generalizability of the results.

All of the respondents completed a battery of questions that assessed the relative importance of several factors on the college participation decision. Respondents were not asked to provide demographic information because this data was available from secondary data files of the Tennessee Higher Education Commission (THEC) and the Tennessee Student Assistance Corporation (TSAC). As Dillman (1994) notes, respondents are more likely to reply honestly if they do not perceive the survey instrument to be overly intrusive. Furthermore, he notes that those surveys that omit demographic information are less intrusive and generally produce more

reliable and valid results than instruments that contain such questions. The survey instrument was pre-tested on a randomly selected group of students who did not receive state based financial aid in 1998 in order to assure that the instrument accurately measured research constructs such as factors that impact participation and college choice.

RESULTS

Several studies (Tierney, 1980; Hossler, Braxton, & Coopersmith, 1989; Anderson & Hearn 1992; Heller, 1996; Freeman, 1999) note that economic considerations are often the determinant element in the participation decision. These considerations are of the utmost importance to those who "have the least" (Jackson 1978). The results of this study support the findings noted in the literature, but offer several startling insights into the participation/college choice decision. The majority of the respondents in the study population reported that although they were denied TSAC assistance, they still elected to participate in higher education. Specifically, 81% of the respondents noted that they were enrolled during the fall 1999 semester. These results are somewhat surprising given the base assumption of policy makers in Tennessee that the non-receipt of aid would prevent such students from attending college (Governor's Council Report 1999). However, the negative effects of non-receipt of state financial aid and preexisting economic conditions are found in patterns of institution selection and increased the reliance upon employment to meet the cost of postsecondary education participation.

Several core questions were posed to both enrollees and non-enrollees in order to assess the relative impact of key theoretical constructs on the participation decision. Research (Astin 1975; Hossler Braxton and Coopersmith 1989) has demonstrated that the receipt of financial aid plays a major role in the college participation decision of first generation college students. Such individuals are placed in the tenuous situation of lacking familial support for participation

because of their first generation status. Almost 55% of the respondents reported that they were first generation college students. However, chi square analysis did not reveal a significant difference between groups with respect to the decision to attend college ($\chi^2 = 1.358$, Pearson's $r = -.22$).

Studies have also demonstrated that student's perceptions of their academic preparation for college impacts the participation decision (Astin 1975). Those students who believe that their high schools adequately prepared them for college are more likely to attend than those who feel unprepared for college. Of the 419 study participants, 65% reported that they believed their high school adequately prepared them for college. However, the two groups of students (prepared v. non-prepared) differed significantly with respect to participation.

Did you attend?	*Prepared for college (YES)*	*Prepared for college (NO)*
YES	82%	77%
NO	18%	23%
(N)	273	142

$\chi^2 = 8.483$, df = 2; $p<.05$
cv = .14; $p<.05$
$r = -.034$; n.s.

Students Enrollment in Fall 1999

Of those students in the state who were denied TSAC grants, 81.4% (341 of the 419 surveyed) reported that they attended a postsecondary school in the fall of 1999. Over 90.0% of these students were attending Tennessee's public institutions (including universities, community colleges, and technology centers) and just over 80% of them reported attending the institution as a full-time student (Table 1). Of note is the pattern of institutional selection when this pool of needy students is compared to the overall population. From 1995-99 Tennessee averaged just under 27,000 "first time freshmen" in the public two-year and four-year public institutions. For

each of these five enrollment periods, students chose to begin their studies at four-year institutions 57 percent of the time and two-year institutions 43 percent of the time (THEC, 2000).

Table One

Respondents Who Attended School in the Fall of 1999

Type of Institution Attended?	
	Percent
Four-Year Public	33.1
Two-Year Public	53.1
Public Technology Center	6.2
Four-Year Private	5.6
Two-Year Private	0.6
Other	1.5
Were you enrolled full or part-time?	
	Percent
Full-Time	80.4
Part-Time	19.4
No Response	0.3

The students in our research pool did not reflect this same ratio of 4-year to 2-year attendance.

Pascarella & Terenzini (1991) describe a "cooling-out function" performed by two-year institutions that leads many lower income students away from the bachelor's degree path. Within our study of unserved TSAC award applicants, 33.1 percent of students chose to attend four-year public and 53.1 percent chose two-year public with the balance reporting attendance at private institutions or technical schools. When considering only those students represented in the public institution categories (86% of the overall population), 38.4 percent of public attendees took the four-year path and 61.6 percent took the two-year path.

Although denied aid through the TSAC grant program, these students still elected to attend college, and reported that this participation was supported by a variety of auxiliary student financial aid sources. Primarily, the federal Pell Grant program served 87.7% of the students who were attending a postsecondary institution. The following table shows the type of grants and/or loans that the attendees received for the 1999-2000 school year (Table 2).

Although the majority of the students received a Pell Grant, the maximum award in that program for the '99-00 academic year was $3,000. Even if the student decided to save money by avoiding the costs associated with on-campus residency, this award represents approximately 47% of the average costs of attendance (COA) at Tennessee's public four-year institutions. It should be noted that the possibility of qualifying for the full Pell Grant amount is minimal because the award amount is not only linked to student need but also to allowable costs to attend the respective institution (including private school costs as well). Tennessee's traditionally low tuition rates thus have the unintended consequence of reducing the amount of federal financial aid available to its residents.

Table Two

Respondents Who Attended School in the Fall of 1999

Types of Financial Aid Received?	
	Percent
Pell Grant	87.7
Stafford Loan (Subsidized)	20.5
Stafford Loan (Unsubsidized)	12.3
Job Training Partnership Act (JTPA)	6.2
Perkins Loan	1.5
Federal Workstudy	5.0
Supplemental Educ Opportunity Grants (SEOG)	2.6
Parent Loan for Undergraduate Students (PLUS)	0.6
Scholarship	7.6
Federal Direct Loan (Subsidized)	3.5
Federal Direct Loan (Unsubsidized)	2.3
While enrolled in school did you work full or part-time?	
	Percent
Full-Time	22.0
Part-Time	46.9
No	31.1

Researchers and practitioners alike have assumed that more students are feeling pressure to work while in school to "make ends meet." This alarming trend was validated by the respondents in this study. Of those students who were enrolled in 1999, almost 69% reported that they held a job while enrolled in school (Table 2). This data parallels a trend over last decade in which the majority of students are forced to hold down jobs while attending school.

An analysis of a secondary data source, the *Tennessee Enrolled Student Survey*, reveals that between 1993-99, 69.2% of students were employed full/part-time while enrolled in the Tennessee higher education system. Furthermore, this survey demonstrated that when asked to report the number of hours worked per week, 21.5% of the respondents stated that they worked 10-19 hours, 29.5% worked 20-35 hours, and 15.1% worked 35 hours and above. Thus, nearly one-half of all students enrolled in the Tennessee postsecondary system work 20 hours or more per week and approximately two-thirds work 10 hours or more per week. As Pascarella and Terenzini (1991) note, these employment patterns not only have a negative impact on the college experience, they also negatively impact student retention and persistence to degree.

Table Three

Respondents Who Did Not Enroll in the Fall of 1999

Chief reason for not being able to attend?	
	Percent
Financial	35.9
Employment	9.0
Sickness	6.4
Moved	5.1
Not Feeling Prepared	5.1
Distance	1.3
Marriage	1.3
Other	34.6
No Response	1.3
Are you currently employed?	
	Percent
Full-Time	44.9
Part-Time	23.1
No	29.5
No Response	2.6

Students Not Enrolled in Fall 1999

Of the 419 non-recipients of financial aid surveyed in this study, 18.6% reported that they did not attend school in the fall of 1999. These individuals were asked to state the primary factor that determined their non-participation decision. Predictably, financial barriers emerged as the number one reason for non-attendance as 35.9% of the respondents mentioned this as their chief impediment to college participation. (Table 3). The second most common response was that

their "employment" prevented college participation. Table 3 also shows the percentage of these individuals who were currently employed at the time of the survey administration. With such a high percentage working, it can be argued that the desire, or need to work was a prevalent factor in most of the non-participation decisions even if it was not the primary barrier.

Future Plans of All Participants

All the participants in the survey were asked about their future postsecondary education plans. When the 419 survey participants were asked about plans to attend college in the fall of 2000, 83.1% stated that they did plan to enroll (Table 4). This statistic was only slightly higher than the 81.4% who reported attendance in fall 1999. Those who expressed that they did not plan to attend in fall 2000 were asked if they had any plans for continuing their education in the future. Table 4 shows that approximately one-third of this group hoped to continue their education at some point. These students were then asked what the higher education system could do to most help them if they wanted to attend college in the future. Financial assistance was mentioned by 51.6%, with 17.7% requesting increased program offerings and 11.3% mentioning that they needed to become better prepared academically before they enrolled in college.

Table Four

All Participants in the Survey	
Plan to attend school in the fall of 2000?	
	Percent
Yes	83.1
No	14.8
No Response	2.1
Those Students Not Planning to Attend in Fall 2000	
Do you plan to attend anytime in future?	
	Percent
Yes	33.9
No	53.2
No Response	12.9
What could be done to help if you wanted to attend?	
	Percent
Financial Assistance	51.6
Increase Program Offerings	17.7
Academic Preparation Work	11.3

THE FUTURE: FINANCIAL AID TRENDS IN TENNESSEE

The National Association of State Student Grant and Aid Programs (NASSGAP) annually provides benchmarks by which researchers and practitioners can evaluate state commitments to financial aid programs. In a recent NASSGAP's report it was noted that during 1997-98 Tennessee awarded a little more than $20 million in need and merit based aid, compared to the national average per state of over $67 million. Table 5 demonstrates the mix of total grant aid for Tennessee and national entities.

Table 5: 1997-98 Total State Level Grant and Aid

	UG Need	Grad Need	UG Merit	Grad Merit	Total
Tennessee Total	$20,438,000	-	$779,000	$132,000	$21,349,000
National Total	$2,761,154,000	$24,972,000	$551,832,000	$51,276,000	$3,389,234,000
National Average	$55,223,080	$499,440	$11,036,640	$1,025,520	$ 67,784,680

Source: National Assoc of State Student Grant & Aid Programs, 1997-98 Annual Survey Report

One of the dangers of making national comparisons is that such comparisons often do not account for population variations from state to state. After adjusting the data to account for population, Tennessee distributes approximately $4 per resident in financial aid compared to the national per resident average of $13 (Table 6). Tennessee also falls far behind national averages in aid per resident aged 18-24 and per undergraduate FTE.

Table 6: 1997-98 Aid Dollars per Various Demographics

	Amount	Rank	
Tenn per Resident	$4	35	
National per Resident	$13		
Tenn per Resident (18-24 yrs old)	$42	35	
National per Resident (18-24)	$136		
Tenn per Undergraduate FTE	$150	33	
National per Undergraduate FTE	$464		

Source: National Assoc of State Student Grant & Aid Programs, 1997-98 Annual Survey Report

Tennessee also lags behind her regional peers with respect to the average student financial aid award. In an attempt to gauge regional comparisons, data for the 16 member states of the Southern Regional Education Board (SREB) were extracted from the NASSGAP report.

SREB comparisons are commonly used by policymakers in Tennessee because of the similarity amongst member states. Table 7 shows the 1997-98 total need and merit based aid in Tennessee compared to the SREB states including and excluding Georgia. Georgia's much publicized HOPE Scholarship program skews averages among the states, but even with the removal of Georgia, Tennessee awards approximately one-half of the aid of other SREB states.

Table 7: 1992-93 and 1997-98 Totals Relative to Peer States				
		92-93	97-98	
Tennessee		$15,099,000	$21,349,000	
SREB Average with Georgia		$22,190,933	$52,797,067	
SREB Average without Georgia		$22,023,857	$41,625,429	
National Average		$45,018,220	$67,784,680	
Source: National Assoc of State Student Grant & Aid Programs, 1997-98 Annual Survey Report				

Table 8: 1992-93 to 1997-98 Change in Aid Levels				
		92-93	97-98	Percent Change
Tennessee		$15,099,000	$21,349,000	41%
SREB Totals with Georgia		$332,864,000	$791,956,000	138%
SREB Totals without Georgia		$308,334,000	$582,756,000	89%
National Totals		$2,250,911,000	$3,389,234,000	51%
Source: National Assoc of State Student Grant & Aid Programs, 1997-98 Annual Survey Report				

The last several years have produced sizeable increases across the country in the availability of state level student aid. From 1992-93 to 1997-98, Tennessee experienced a 41 percent increase in total aid from state allocations (Table 8). Nationally, states have appropriated 51 percent more aid dollars over that same period of time. Removing Georgia from the analysis, the SREB states have well outpaced Tennessee by increasing aid to need and merit programs by 89 percent. Not only is Tennessee's current commitment to financial aid less than that of neighboring states and the country at large, but the rate of increase in those same states will make it almost impossible to "catch-up" at the current level of commitment in Tennessee.

The students surveyed in this study represent groups historically denied access to higher education and those citizens who stand to benefit the most from an advanced degree. College

expenses - most notably maintenance fees and tuition - continue to outpace increases in median family income and average cost of living. Due to these steep increases in fees, participation rates are sure to be influenced as students and their families weigh the present costs of college against the future benefits of a degree. The increased availability of grants, rather than loans, for low-income students will alleviate the need to borrow money and therefore enhance entry into the pipeline and positively influence retention and persistence rates.

CONCLUSIONS

Scholars (Wiess, 1972; Meltsner, 1976; Gordon, 1992; Birnbaum, 2000) have increasingly called for a greater nexus between academic research and public policy development, formation, and implementation. Although this idea is widely accepted, there are very few examples of scholarly research moving into the higher levels of the decision-making process. Birnbaum (2000) and Weiss (1982, as cited in Birnbaum, 2000) each posit that research modifies the definition and perceptions of problems and places boundaries upon available solutions. In line with the research of Kingdon (1995), policy scholars or researchers may see themselves as policy entrepreneurs who help inform and shape the public policy agenda. In much the same way, this study has impacted several initiatives on the postsecondary policy front as well as the higher education funding debate and eventual appropriation.

In cooperation with the Tennessee Student Assistance Corporation and the Tennessee Higher Education Commission, this study provided much needed data to the debate over the fate of the unserved students in the Tennessee Student Assistance Award program. Combined with growing concerns for lagging participation rates in higher education and this new knowledge of ever increasing pressures to borrow money or increase workload to pay for education, the improvement requests of the higher education community for financial grant and aid programs

were met with less criticism. During the 2000 legislative session the Tennessee Student Assistance Award program was appropriated $9 million in improvement funds - almost a 50 percent increase over its base budget of approximately $20 million. With this additional money nearly 7,500 of the 13,000 unserved students were provided with grants through the state financial aid program.

Even with this substantial increase, Tennessee still lags well behind regional and national financial aid benchmarks and about 5,500 of the states' poorest students are still denied aid because of lack of funds. As noted earlier, in 1997-98 the state awarded a little more than $20 million in need and merit based aid compared to the national average of $67 million per state. Accounting for population disparity, Tennessee distributes $4 per resident in aid compared to the national per resident average of $13. Tennessee also falls far behind national averages in aid per resident age 18-24 and per undergraduate FTE. Not only is the state's current commitment to financial aid less than peer comparisons, but the rate of increase in those same states will make nearly impossible any attempts to catch-up at the current level of commitment in Tennessee (NASSGAP, 1999).

If the state of Tennessee is to realize the full potential of its human capital, segments of the population like the one in this study must not be ignored. Participation and retention barriers litter the landscape of these students' futures in higher education and compromise their entry into the workforce. Whether seen in increases in work activity while enrolled, disproportional student loan burdens, or extended time to degree, the lack of commitment to student grant programs have far-reaching consequences. Higher education continues to be one of the central keys to opening the door to prosperity and individual self-actualization. Seen as an investment rather than a cost, postsecondary budgeting and increased allocations to financial aid represent some of the safest bets to improve the human capital stock of Tennessee's citizenry.

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